

**COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Piedmont Regional Office**

STATEMENT OF LEGAL AND FACTUAL BASIS

BFI Waste Systems of North America, LLC and
Gas Recovery Systems, LLC (GRS) (Engine owner/operator)
Charles City Road Landfill (CCRLF) Facility
Henrico County, Virginia
Permit No. PRO – 51069

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, BFI Waste Systems of North America, LLC has applied for a Title V Operating Permit for its Charles City Road Landfill Facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact: _____ Date: _____
Jennifer Hoeffner
804-527-5123

Air Permit Manager: _____ Date: _____
James E. Kyle, P.E.

Regional Permit Manager: _____ Date: _____
Kyle Ivar Winter, P.E.

FACILITY INFORMATION

Permittee

BFI Waste Systems of North America, LLC and GRS, LLC (Engine owner/operator)
2001 Charles City Road
Richmond, VA 23231

Facility

Charles City Road Landfill
2325 Charles City Road
Henrico County, Virginia

County-Plant Identification Number: 51-087-0168

SOURCE DESCRIPTION:

NAICS Code 562212 - BFI Waste Systems of North America, LLC, Charles City Road Landfill Facility is a closed Municipal Solid Waste (MSW) landfill (closed since 1996 and stopped accepting waste in 1993). The facility is permitted to operate a MSW landfill with a waste capacity of 3.9 million mega-grams and a landfill gas collection system. The landfill gas collection system includes three Waukesha internal combustion engines (engines owned and operated by Gas Recovery Systems, LLC) and an open flare system, all operated in accordance with the Federal plan, 40 CFR 62, Subpart GGG and Virginia Rule 4-43 (implements 40 CFR 60, Subpart Cc). The facility also operates under the requirements of its Solid Waste Permit No. 129, issued by the Department.

Since the Gas Collection and Control System has been operated since 1992 and the facility may elect to continue energy recovery, requirements found in 40 CFR 62, Subpart GGG indicate that a Title V permit is required and must remain in effect until the requirements of 40 CFR 62, Subpart GGG and the State Only requirements of Rule 4-43 are completed. This source is located in an attainment area for all pollutants. The facility is currently permitted under a Title V Operating Permit initially issued on September 7, 2006 and a Minor NSR Permit issued on July 16, 2013. The Minor NSR Permit issued on July 16, 2013 was to update the permit to reflect the changes that occurred as a result of the 1,604 scfm enclosed flare system being shutdown and inactive and the construction and operation of the an open flare system rated at 1,200 scfm. The current permit action is for a significant modification based on the latest issuance of the Minor NSR Permit and for the renewal of the Title V Operating Permit. An application for permit renewal was received on October 19, 2010 by the Virginia Department of Environmental Quality and was deemed administratively complete October 26, 2010.

COMPLIANCE STATUS

The last full compliance evaluation was conducted on May 21, 2012 and the facility was found to be in compliance. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
P01	1	Municipal Solid Waste Landfill, Solid Waste Permit No. 129	3.9 million Mega-grams 13 Million BTU/Hour (each) 49 Million BTU/Hour, 1604 scfm maximum 36.75 Million BTU/Hour, 1200 scfm maximum	GCCS (1,200 SCFM) and Three (3) Waukesha L7042GL Internal Combustion (Landfill Gas) generators - <u>Primary</u> Enclosed Flare System – <u>Secondary</u> (Callidus technologies)- equipment currently shutdown and deactivated Open Flare System – <u>Secondary</u>	NA PCD 1 PCD 2 PCD 3 PCD-4 PCD 5	NMOC	7/16/2013
		Landfill Surface Roads	--	--	--	--	--

EMISSIONS INVENTORY:

A summary of BFI Waste Systems of North America, LLC, Charles City Road Landfill Facility's most recent annual emissions are shown below. Emission levels are expected to decrease over time as the landfill waste decomposes. A copy of the 2012 annual emission inventory is attached. Emissions are summarized in the following table.

PLANTWIDE EMISSIONS SUMMARY [TONS PER YEAR]	
CRITERIA POLLUTANTS	2012 ACTUAL EMISSIONS
Particulate Matter (PM/PM10)	5.4
Nitrogen Oxides (NOx)	12.2
Sulfur Dioxide (SO2)	0.2
Carbon Monoxide (CO)	30.0
VOC	3.4

EMISSION UNIT APPLICABLE REQUIREMENTS – [Emission Units: P01]

The Title V emission requirements are based on the following: the Minor NSR permit issued on July 16, 2013, 40 CFR Part 62 Subpart GGG, The Federal Plan for Municipal Solid Waste Landfills That Commenced Construction Prior to May 30, 1991 and Have Not Been Modified or Reconstructed Since May 30, 1991, Virginia Rule 4-43, and 9 VAC 5-80-50 *et seq.*, Part II-Article 1 Federal Operating Permit for Stationary Sources.

Limitations

The July 16, 2013 Minor NSR permit conditions 2, 3, 5, 7, 8, 9, 10, and 11 are included in the Title V permit. These conditions limit operation of the three internal combustion engines (PCD 1-3) and open flare (PCD 5) opacity, hourly and annual emissions, operational standards (NSPS 60.18), flare fuel types, engine and flare fuel quantity. The Minor NSR permit condition limitations are based on operational, BACT, and 40 CFR Part 62 Subpart GGG requirements.

Monitoring and Recordkeeping

The condition numbers listed below are from the July 16, 2013 Minor NSR permit and conditions are also from NSPS, Subpart GGG.

Condition 2, requires flame presence from the open flare be monitored by using thermocouples or any other equivalent device. It also requires the flare be monitored on a daily basis to ensure that it is operated and maintained in conformance with manufacturer's specifications.

Condition 12, requires monthly visible observations of the three internal combustion engines and/or flare. If visible emissions are observed, corrective action is required such that the unit or units resume operation with no visible emissions, or a Method 9 visible emission evaluation (VEE) shall be conducted to determine compliance with the 5% opacity limit. If compliance is not demonstrated by the VEE, timely corrective action is required to ensure that the engines and/or flare resume operation that is in compliance with the opacity limit and the corrective measures shall be recorded.

Condition 13, includes requirements for maintaining records of all monitoring and testing required by the NSR regulations. These records include the annual throughput of landfill gas, visible emissions observation log, flame presence in the open flare, operating procedures, maintenance schedule and service records of the control equipment, Training records, maintenance schedule including unscheduled maintenance written operating procedures and operator training records.

Compliance Assurance Monitoring (CAM) requirements of 40 CFR 64 do not apply to the facility because it is not a major source. The facility is subject to Title V permitting due to the requirements of NSPS Subpart GGG.

Testing

The facility is required to be constructed to test or monitor upon reasonable notice.

Any additional testing on the turbines is required to be conducted in accordance with the appropriate test methods and in accordance with procedures approved by DEQ.

The initial performance test to determine the net heating value of the gas being combusted and the actual exit velocity for the open flare has been satisfied. No other Facility emission testing is required.

Reporting

Condition 4 of the July 16, 2013 Minor NSR permit requires the facility to submit an annual NMOC emission rate report and equipment removal report 30 days prior to removal or cessation of operations of the control equipment per the Federal plan, 40 CFR 62, Subpart GGG and Virginia Rule 4-43 (implements 40 CFR 60, Subpart Cc).

Facility Wide Requirements

Total annual emissions from the operation of the facility.

Streamlined Requirements- None

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

Comments on General Conditions

B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.1-20.01:2 and §10.1-1185 of the *Code of Virginia*, and the "Department of Environmental Quality Agency Policy Statement NO. 3-2001".

This general condition cites the Articles that follow:
Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80.

Federal Operating Permits for Stationary Sources

This general condition cites the sections that follow:
9 VAC 5-80-80. Application
9 VAC 5-80-140. Permit Shield
9 VAC 5-80-150. Action on Permit Applications

F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

This general condition cites the sections that follow:
9 VAC 5-40-41. Emissions Monitoring Procedures for Existing Sources
9 VAC 5-40-50. Notification, Records and Reporting
9 VAC 5-50-50. Notification, Records and Reporting

This general condition contains a citation from the Code of Federal Regulations as follows:
40 CFR 60.13 (h). Monitoring Requirements.

J. Permit Modification

This general condition cites the sections that follow:

9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources

9 VAC 5-80-190. Changes to Permits.

9 VAC 5-80-260. Enforcement.

9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources

9 VAC 5-80-1790. Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas

9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Non-attainment Areas

U. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on general condition F.

This general condition cites the sections that follow:

9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction

9 VAC 5-80-110. Permit Content

Y. Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

This general condition contains a citation from the Code of Federal Regulations that follow:

40 CFR 61.145, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to demolition and renovation.

40 CFR 61.148, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to insulating materials.

40 CFR 61.150, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to waste disposal.

This general condition cites the regulatory sections that follow:

9 VAC 5-60-70. Designated Emissions Standards

9 VAC 5-80-110. Permit Content

STATE ONLY APPLICABLE REQUIREMENTS

The following Virginia Administrative Codes have specific requirements only enforceable by the State and have been identified as applicable by the applicant:

9 VAC 5 Chapter 50, Part II, Article 2: Standards of Performance for Odorous Emissions

9 VAC 5 Chapter 50, Part II, Article 3: Standards of Performance for Toxic Pollutants

HCl emissions from the operation of the open flare and three engines shall not exceed 0.6 lb/hr

FUTURE APPLICABLE REQUIREMENTS

On May 23, 2002 EPA proposed amendments to the Part 60 landfill rule (67 FR 36476). The purpose of the amendments is to clarify the rule with respect to a) what constitutes an adequate landfill gas treatment system, b) exemption from control of landfill gas that is treated/upgraded, and 3) who is responsible for control of untreated landfill gas that is sold. The amendments have not yet occurred.

GREENHOUSE GAS (GHG) REQUIREMENTS - There are no applicable GHG permitting requirements for this source.

INAPPLICABLE REQUIREMENTS

Standards of Performance for Municipal Solid Waste Landfills (40 CFR 60, Subpart Cc) does not apply because the facility NMOC emissions are below 50 mega-grams.

Standards of Performance for Municipal Solid Waste Landfills (40 CFR 60, Subpart WWW) does not apply because the facility NMOC emissions are below 50 mega-grams.

National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills (40 CFR 63, Subpart AAAA) does not apply because the facility NMOC emissions are below 50 mega-grams.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, record keeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110. The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted	Rated Capacity (5-80-720 C)
1-1	Engine Oil Tank	9 VAC 5-80-720	VOC	1500 Gallons
1-2	Glycol Tank	9 VAC 5-80-720	VOC	500 Gallons
1-3	Waste Oil Tank	9 VAC 5-80-720	VOC	500 Gallons
1-4	Stop Oil Tank	9 VAC 5-80-720	VOC	500 Gallons
1-5	Compressor Oil Tank	9 VAC 5-80-720	VOC	500 Gallons

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION:

The proposed permit was placed on public notice in the Style Weekly from November 20, 2013 to December 20, 2013. The permit is being concurrently reviewed by EPA. The EPA review period ended on January 6, 2014. No comments were received during the Public Comment period and US EPA did not comment on this final draft.